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School mobility and educational outcomes of off-reserve First Nations students

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Highlights

- According to the 2012 Aboriginal Peoples Survey, more than two-thirds (70%) of off-reserve First Nations students in Grades 1 to 6 had moved schools at least once since starting preschool.

- A little less than half (48%) of off-reserve First Nations students in Grades 7 to 12 had moved schools at least once since starting grade 7.

- Among off-reserve First Nations students in Grades 1 to 6 who had moved schools, the most commonly reported reasons for their last school move were a family or child move (42%) and a regular progression move (35%).

- Among off-reserve First Nations students in grades 7 to 12 who had moved schools, the most common reason reported for their last school move was a regular progression school move (63%).

- Off-reserve First Nations students in Grades 1 to 6 who had moved schools once for reasons other than regular progression were more likely than students who had not moved schools or had one regular progression move to be Status Indians (68% versus 58%); to need or receive help because of a behavioural/emotional problem (41% versus 23%); and to live in a population centre[1] (88% versus 76%).

- Off-reserve First Nations students in Grades 7 to 12 who had moved schools once for reasons other than regular progression were more likely than students who had not moved schools or had one regular progression move to live in a lower income household (38%[E] versus 22%); to have parents with less than high school graduation (25% versus 9%[E]); to live in a population centre (86% versus 77%), and were less likely to have parents who were involved in school activities (52% versus 65%).

- Off-reserve First Nations students in Grades 1 to 6 who had moved schools once for reasons other than regular progression were significantly more likely than students who had not moved schools or had one regular progression move to have repeated a grade (10%[E] versus 6%[E]) and to have received help from a tutor (33% versus 22%).

- In Grades 7 to 12, off-reserve First Nations students who had moved schools once for reasons other than regular progression were less likely than students who had not moved schools or had one regular progression move to get mostly As on their last report card (22% versus 34%) or to be happy at school (80% versus 90%). Also, 28%[E] of students who had moved schools once for reasons other than regular progression had repeated a grade, compared with 13% of students who had not moved schools or had one regular progression move.

1. Population centre has at least 1,000 inhabitants and no fewer than 400 persons per square kilometre. The term "population centre" replaces the term "urban area."

Introduction

School mobility—changing schools—can have a negative effect on children's academic success. Research in the general population has shown that changing schools is associated with difficulties in school (Mehana and Reynolds, 2004; Mantzicopoulos and Knutson, 2000; Demie, 2002; Alexander, Entwistle and Dauber, 1996). A change of schools may affect academic achievement because it breaks up peer groups and requires children to adapt to new teachers and a new learning environment (Alexander, Entwisle and Dauber, 1996). School mobility has been related to socioeconomic status, in that the students most likely to change schools tend to live in lower-income families, lone-parent families, and families headed by parents who are not high school graduates (Wood, Halfon, Scarlata, Newacheck and Nissim, 1993).

Studying school changes among First Nations people may be particularly relevant, given their comparatively high residential mobility and less favourable educational outcomes. According to the National Household Survey (NHS), in 2011, 22% of off-reserve First Nations people[2] were at an address different from where they had lived five years earlier; the corresponding percentage for non-Aboriginal people was 18% (Statistics Canada, 2011a). Also, NHS results show that 31% of 25- to 64-year-old off-reserve First Nations people did not have a high school diploma,[3] compared with 15% of the non-Aboriginal population in the same age group (Statistics Canada, 2011b).

The Canadian Council on Learning (2008) has identified school mobility as a contributing factor to low high school completion rates among Aboriginal people. Aman (2008) reported that school mobility was associated with dropping out of high school among Aboriginal students in British Columbia, and as the number of moves increased, the likelihood of high school completion decreased. However, research on the impact of school mobility on First Nations students is limited.

Based on data from the 2012 Aboriginal Peoples Survey, the aim of this paper is to understand how changing schools for reasons other than regular progression is related to the academic outcomes of off-reserve First Nations students. This study examines the reasons students in Grades 1 to 6 and in Grades 7 to 12[4] last moved schools (regular progression, residential move, academic performance, or problematic school interactions). Then, the characteristics of movers and non-movers (see *Conceptualizing school mobility groups* for definitions) are compared: student characteristics (for example, age, sex, registered Indian status); family characteristics (for example, household income, living arrangements, parental education); and school support characteristics (for example, parental involvement in school activities). Finally, movers' and non-movers' school outcomes (grades on last report card, happiness at school, ever repeated a grade, and receipt of help from a tutor) are compared to determine if having one "non-regular" progression school move was negatively related to academic success. Separate analyses are conducted for students in Grades 1 to 6 and those in Grades 7 to 12.

2. The National Household Survey data in this report pertain to First Nations people living off reserve who reported a single identity of "First Nations" (North American Indian).
3. They may have other certificates, diplomas or degrees.
4. Grade nomenclature differs by province. Grades 7, 8, 9, 10, and 11 are Secondary I, II, III, IV, and V in Quebec. Grades 9, 10, 11, 12 are Senior 1, Senior 2, Senior 3, and Senior 4 in Manitoba. Grades 10, 11, and 12 are Level I, Level II and Level III in Newfoundland and Labrador.

Data source, concepts and analysis

Data source

The data are from the 2012 Aboriginal Peoples Survey (APS), a national survey that covered First Nations people living off reserve, Métis, and Inuit aged 6 or older as of February 1, 2012. The survey excluded people living on Indian reserves and settlements and in certain First Nations communities in the Yukon and the Northwest Territories. The sample of approximately 50,000 respondents was drawn from those who reported Aboriginal identity or ancestry on the 2011 National Household Survey (NHS). The response rate was 76%. Additional information is available at www.statcan.gc.ca/APS or the *Aboriginal Peoples Survey, 2012: Concepts and Methods Guide*.

The sample for the current study consists of off-reserve First Nations students (with or without registered Indian status) who were currently attending school (on- or off-reserve) in Grades 1 to 6 (n = 2,345) or Grades 7 to 12 (n = 2,366). Interviews for 96% of students in Grades 1 to 6 and 65% of students in Grades 7 to 12 were completed by proxy, in most cases, by parents or guardians.

Concepts

Off-reserve First Nations people

Off-reserve First Nations people are respondents who self-identified as First Nations and/or as First Nations in combination with Métis or Inuit on the 2012 APS.

School mobility and reasons for school move

For students in Grades 1 to 6, the APS asked, "How many different schools has the student attended altogether? Please include preschool and kindergarten." For students in Grades 7 to 12, the question was: "Since starting Grade 7 (Secondary I), how many different schools has the student attended altogether? (Include traditional, alternative, vocational, adult high schools, etc.)."

The APS asked the main reason for the student's last change of school. Response options were grouped into five categories: 1) Regular progression move; 2) family or child/teen moved; 3) academic performance or problematic school interactions (marks too low/not progressing well, expelled, not getting along with students, not getting along with teacher or other school staff, concerns about safety at school); 4) school closed or new school opened closer to home; and 5) seeking specific cultural program or curriculum.

Student, family and school support characteristics

The *student* characteristics were: sex, age, registered Indian status, whether the student needed or received help because of a behavioural/emotional problem, and whether the student had been diagnosed with a learning disability. The receipt of or need for help because of a behavioural/emotional problem was based on self- or parent-reported responses to four questions: "What are the reasons you or the teachers feel he/she requires additional help or tutoring? 1) a behavioural problem? 2) an emotional problem?" and "What are the reasons the student is receiving additional help or tutoring? 3) a behavioural problem? 4) an emotional problem?" The presence of a learning disability was based on the question, "Has a health professional diagnosed any of the following long-term conditions: learning disability?"

The *family* characteristics were: household income, living arrangements of the student, highest level of parent(s) or guardian(s) education, and residence in a rural area or a population centre. A population centre has at least 1,000 inhabitants and no fewer than 400 persons per square kilometre. The term "population centre" replaces the term "urban area." Household income, based on total household income and household size, was divided into quartiles. The three highest quartiles were combined to create two categories: 1) In the lowest income quartile; and 2) Not in the lowest income quartile. Students' living arrangements were classified as: with two parents, with one parent, or with other relatives, non-relatives or foster parent(s) only. Highest level of parental education was classified as: two parents or guardians have high school graduation or more; at least one parent or guardian has high school graduation or more; and no parent or guardian has high school graduation or more. Lone-parent families were included in the categories, "One parent/guardian has high school graduation or more" and "No parent/guardian has high school graduation or more."

Data source, concepts and analysis *(continued)*

The *school support* characteristics pertained to parents' involvement in school activities and to the school's support of Aboriginal culture. Parent(s) were considered to be involved in the school if they answered "yes" to any of a series of questions about parent and family participation in school activities, such as volunteering to help with a class trip or fundraising. The school was considered to support Aboriginal culture if a response of "strongly agree" or "agree" was given to the question, "How do you feel about the following statements about the student's school? This school supports First Nations, Métis, or Inuit culture (through teaching and/or activities)."

Outcomes

School success was measured using four outcomes: 1) overall grade average on last report card (mainly As versus mainly Bs, Cs, Ds, Es, Fs); 2) whether the student ever repeated a grade (yes, no); 3) whether the student was receiving additional help or tutoring (not including help from family members) (yes, no); and 4) whether the student was happy at school (strongly agree/agree versus disagree/strongly disagree).

Analysis

The first part of this analysis presents descriptive statistics to compare the reasons for the last school move for students in Grades 1 to 6 with those for students in Grades 7 to 12. The rest of the analysis examines students in Grades 1 to 6 and in Grades 7 to 12 separately because the literature shows that the timing of school moves, for example moving in elementary school versus high school, can have an impact on student's academic success (Reynolds, Chen & Herbers, 2009; Heinlein & Shinn, 2000). Descriptive statistics are also used to compare the characteristics and school outcomes of movers and non-movers. Differences between estimates were tested to ensure statistical significance, which was established at the 0.05% level. A Bonferroni adjustment was applied to control the rate of Type 1 error.

Logistic regression analyses were used to predict each of the four school outcomes for movers and non-movers. For each outcome, separate models were fitted for students in Grades 1 to 6 and for students in Grades 7 to 12. The purpose of these analyses was to determine if associations between school mobility and the outcomes remained significant when controlling for the effects of the potential confounding variables (student, family and school support characteristics). With two exceptions, all descriptive characteristics were included in the models. Needed or received help for a behavioural/emotional problem was excluded from all models because it is correlated with the outcomes. Parental involvement was excluded from the models for students in Grades 1 to 6, almost all of whom were reported to have parents who were involved in their education.

All analyses were based on weighted data. To account for the complex survey design, standard errors, coefficients of variation and 95% confidence intervals were estimated using a bootstrapping technique. Because of the specific bootstrap method used in the APS, a Fay adjustment was applied (Phillips, 2004).

Results

Different reasons for moves

Since starting preschool, 70% of off-reserve First Nations students in Grades 1 to 6 had changed schools, as had 48% of students in Grades 7 to 12 since they started Grade 7.

The reasons for these changes differed between the two groups. For students in Grades 1 to 6, the most common reason was a residential (family or child/teen moved) move (42%); those in Grades 7 to 12 were much less likely to have changed schools for this reason (20%) (Table 1). Another 35% of Grades 1 to 6 students who changed schools did so because of regular progression through the school system, whereas this was the reason among the majority—63%—of students in Grades 7 to 12 who changed schools. Grades 1 to 6 students were significantly more likely than those in Grades 7 to 12 to have moved because of a school closure or because a new school opened closer to home: 7% versus 3%[E]. The percentages of students in Grades 1 to 6 or in Grades 7 to 12 who moved because they were seeking a specific cultural/curriculum or program did not differ significantly.

Table 1
Reason for last school move for off-reserve First Nations students in grades 1 to 6 or Grades 7 to 12, Canada, 2012

Reason for last school move	Grades 1 to 6[1]	Grades 7 to 12[2]
	percent	
Regular progression	34.7	62.7*
Family/Child move	42.1	20.2*
Academic performance/Problematic social interaction	3.7[E]	5.2[E]
School closed/New school opened close to home	7.0	2.8[E]*
Seeking specific cultural/curriculum program	7.2	4.8
Other	5.3[E]	4.2

[E] use with caution

* significantly different from estimate for students in grades 1 to 6 ($p < .05$)

1. Reasons for last school move since starting preschool.

2. Reasons for last school move since starting grade 7.

Source: Statistics Canada, Aboriginal Peoples Survey, 2012.

Conceptualizing school mobility groups

Based on the number of schools attended and the reason for the last change of school, two categories of students were identified for further analysis: *movers and non-movers*. *Movers* had attended two schools because of non-regular progression (for example, a residential move or academic performance/social interaction problems). *Non-movers* had attended only one school or had attended two schools, but the reason for the move was regular academic progression (for example, from elementary to high school).

Research suggests that changing schools because of regular progression does not have the same effect on academic success as changes due to non-regular progression (Demie, 2002; Alexander and Entwisle, 1996; Aman, 2008). With a regular progression move, children tend to change schools with other students, leaving peer groups intact and requiring all students adapt to a new curriculum and new teachers. Regular progression moves are also generally timed with breaks in curriculum (Alexander and Entwisle, 1996).

Preliminary analysis of the APS data confirmed that off-reserve First Nations students who reported one regular progression school move had academic outcomes similar to those of students who attended only one school from preschool to Grade 6 or from Grades 7 to 12. For example, the percentage of students in Grades 7 to 12 who had ever repeated a grade was 14% among those who had never moved schools and 13% among those with one regular progression move. (Table A.1 presents all school outcomes). Therefore, for this study, students with one regular progression move were combined with those who had never moved schools in the *non-movers* group.

Based on these definitions, 20% of off-reserve First Nations students in Grades 1 to 6 were movers, and 49% were non-movers. Among students in Grades 7 to 12, 13% were movers and 77% were non-movers. The remaining students—31% of those in Grades 1 to 6 (n = 690) and 10% of those in Grades 7 to 12 (n = 241)—had attended more than two schools. Although the number of times a student changed schools is important to understanding the effect of school mobility (Aman, 2008), the APS asked the reason for only the last school move. This precludes identifying the nature of each move (regular or non-regular progression) for students who changed schools more than once. Thus, the rest of the analysis excludes students who attended more than two schools. The exclusion of multiples facilitates interpretation of the results, but it is a limitation of the study in that the cumulative effect of school moves could not be examined.[5]

Some differences in characteristics between movers and non-movers

Among students in Grades 1 to 6, movers were more likely than non-movers to be Status Indians (68% versus 58%); to need or receive help because of a behavioural/emotional problem (41% versus 23%); and to live in a population centre (88% versus 76%) (Table 2).

5. It is possible to look at the number of school moves, but the results may be confounded because some multiple movers would have moved only as a result of regular progression.

Table 2
Selected characteristics of off-reserve First Nations students in Grades 1 to 6, school movers and non-movers, Canada, 2012

Grades 1 to 6	Total students in Grades 1 to 6 n=2,345	Movers n=429	Non-movers n=1,206
	percent		
Student characteristics			
Sex	**100.0**	**100.0**	**100.0**
Male	51.4	51.5	52.5
Female	48.6	48.5	47.5
Age			
Mean age in years	8.6	8.5	8.2
Registered Indian Status	**100.0**	**100.0**	**100.0**
Status Indian	62.8	67.8*	57.6
Non-Status Indian	37.2	32.2*	42.4
Needs/Receives help because of behavioural and/or emotional problem	**100.0**	**100.0**	**100.0**
Yes	29.3	41.1*	22.8
No	70.7	58.9*	77.2
Diagnosed learning disability	**100.0**	**100.0**	**100.0**
Yes	12.7	14.2[E]	10.6
No	87.3	85.8	89.4
Family characteristics			
Household income	**100.0**	**100.0**	**100.0**
In lowest income quartile	24.9	28.8	21.9
Not in lowest income quartile	75.1	71.2	78.1
Living arrangements of student	**100.0**	**100.0**	**100.0**
With two parents	39.7	36.2	44.1
With one parent	41.1	42.5	37.8
With other relatives, non-relatives only or foster parent(s) only	19.2	21.4	18.1
Highest level of parental education	**100.0**	**100.0**	**100.0**
Two parents/guardians have high school graduation or more	55.9	53.2	57.9
One parent/guardian has high school graduation or more	29.6	32.2	28.4
No parent/guardian has high school graduation or more	14.5	14.7	13.7
Residence	**100.0**	**100.0**	**100.0**
Rural area	18.5	11.9*	24.2
Population centre	81.5	88.1*	75.8
School support characteristics			
Parental involvement in school activities	**100.0**	**100.0**	**100.0**
Yes	94.3	94.7	95.2
No	5.7	F	4.9[E]
School supports Aboriginal culture	**100.0**	**100.0**	**100.0**
Strongly agree/Agree	67.8	61.0	68.0
Disagree/Strongly disagree	32.2	39.0	32.0

[E] use with caution

F too unreliable to be published

* significantly different from estimate for Non-movers ($p < .05$)

Source: Statistics Canada, Aboriginal Peoples Survey, 2012.

For students in Grades 7 to 12, four characteristics of movers and non-movers differed significantly. Movers were more likely than non-movers to live in a lower income household (38%[E] versus 22%); to have parents/guardians with less than high school graduation (25% versus 9%[E]), to live in a population centre (86% versus 77%), and less likely to have parents who were involved in school activities (52% versus 65%) (Table 3).

Table 3
Selected characteristics of off-reserve First Nations students in Grades 7 to 12, school movers and non-movers, Canada, 2012

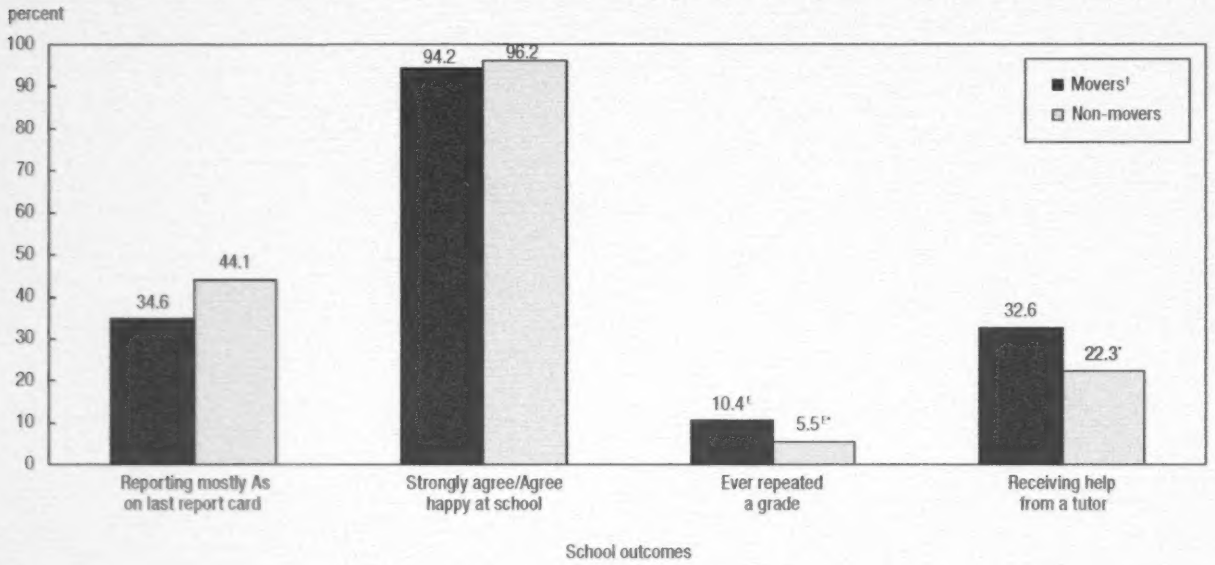
Grades 7 to 12	Total students in Grades 7 to 12 n = 2,366	Movers n = 253	Non-movers n = 1,858
	percent		
Student characteristics			
Sex	**100.0**	**100.0**	**100.0**
Male	51.8	57.5	51.9
Female	48.2	42.5	48.1
Age			
Mean age in years	14.7	14.9	14.5
Registered Indian Status	**100.0**	**100.0**	**100.0**
Status Indian	58.5	64.8	56.7
Non-Status Indian	41.5	35.2	43.3
Needs/Receives help because of behavioural and/or emotional problem	**100.0**	**100.0**	**100.0**
Yes	30.5	28.3[E]	29.4
No	69.5	71.7	70.6
Diagnosed learning disability	**100.0**	**100.0**	**100.0**
Yes	16.7	14.6[E]	16.5
No	83.3	85.4	83.5
Family characteristics			
Household income	**100.0**	**100.0**	**100.0**
In lowest income quartile	25.0	38.0[E]*	21.8
Not in lowest income quartile	75.0	62.0*	78.2
Living arrangements of student	**100.0**	**100.0**	**100.0**
With two parents	39.7	34.2[E]	42.3
With one parent	44.5	51.3	43.1
With other relatives, non-relatives only or foster parent(s) only	15.9	F	14.6
Highest level of parental education	**100.0**	**100.0**	**100.0**
Two parents/guardians have high school graduation or more	56.9	47.6	59.3
One parent/guardian has high school graduation or more	31.8	27.0	31.8[E]
No parent/guardian has high school graduation or more	11.3	25.4*	8.9[E]
Residence	**100.0**	**100.0**	**100.0**
Rural area	20.7	13.9[E]*	23.1
Population centre	79.3	86.1*	76.9
School support characteristics			
Parental involvement in school activities	**100.0**	**100.0**	**100.0**
Yes	62.4	52.3*	65.1
No	37.6	47.7*	34.9
School supports Aboriginal culture	**100.0**	**100.0**	**100.0**
Strongly agree/Agree	68.9	61.4	69.3
Disagree/Strongly disagree	31.1	38.6[E]	30.7

[E] use with caution
F too unreliable to be published
* significantly different from estimate for Non-movers ($p < .05$)
Source: Statistics Canada, Aboriginal Peoples Survey, 2012.

Less favourable school outcomes

Based on four measures of school success, off-reserve First Nations students who were movers had less favourable outcomes than those who were non-movers. Grades 1 to 6 students who were movers were significantly more likely than non-movers to have repeated a grade (10%[E] versus 6%[E]) and to have received help from a tutor (33% versus 22%) (Chart 1).

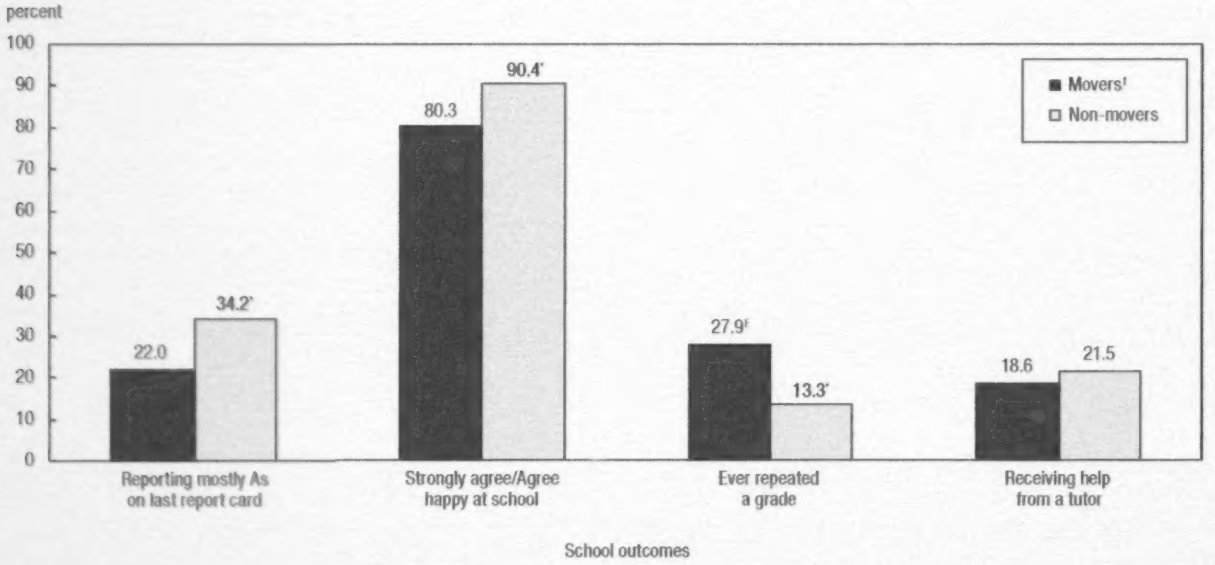
Chart 1
Selected school outcomes for off-reserve First Nations students in Grades 1 to 6, Canada, 2012



! use with caution
* significantly different from reference category ($p<0.05$)
† reference category
Source: Statistics Canada, Aboriginal Peoples Survey, 2012.

In Grades 7 to 12, movers were less likely than non-movers to get mostly As on their last report card (22% versus 34%) or to be happy at school (80% versus 90%) (Chart 2). As well, 28%[E] of movers had repeated a grade, compared with 13% of non-movers.

Chart 2
Selected school outcomes for off-reserve First Nations students in Grades 7 to 12, Canada, 2012



! use with caution
* significantly different from reference category ($p<0.05$)
† reference category
Source: Statistics Canada, Aboriginal Peoples Survey, 2012.

Of course, academic outcomes are influenced by factors other than school mobility, such as household income and parental education. Moreover, these factors are also related to the likelihood of changing schools. Yet even when the potentially confounding effects of student, family and school support characteristics were controlled, the association between changing schools and repeating a grade remained significant for off-reserve First Nations students in Grades 1 to 6. The odds of ever repeating a grade were twice as high among movers as among non-movers. However, the relationship between school mobility and receiving help from a tutor was no longer statistically significant (Results shown in Table A.2).

Similarly, for students in Grades 7 to 12, the association between changing schools and repeating a grade remained significant when the other characteristics were taken into account. By contrast, the relationships between school mobility and getting mostly As on the last report card and happiness at school were not significant when the influence of these characteristics was considered (Results shown in Table A.3).

Discussion

In 2012, 20% of off-reserve First Nations students in Grades 1 to 6 had experienced a non-regular progression change of schools since starting preschool; among students in Grades 7 to 12, 13% had had a non-regular progression change of schools since Grade 7.

Studies of the general population have consistently shown that school movers are more likely than non-movers to live in lower-income families and families headed by parent(s) with less than high school education, and to have behavioural problems or learning disabilities (Demie, 2002; Wood, Halfon, Scarlata, Newacheck and Nissim, 1993). Similarly, the present analysis shows that movers in Grades 1 to 6 were significantly more likely than non-movers to need or receive help because of behavioural/emotional problems. Among students in Grades 7 to 12, movers were more likely than non-movers to live in lower-income households, to have parents with less than high school graduation and less likely to have parents who were involved in school activities.

For the general population, changing schools has been associated with difficulties in school (Mehana & Reynolds, 2004; Mantzicopoulos and Knutson, 2000; Demie, 2002; Alexander, Entwisle and Dauber, 1996). According to the present study, off-reserve First Nations students in Grades 1 to 6 and Grades 7 to 12 who had one non-regular progression move were more likely than those who did not change schools to have repeated a grade. Moreover, this association persisted in multivariate analyses that controlled for other potentially confounding characteristics such as household income, living arrangements, behavioural and emotional problems, learning disabilities, and parental education.

Limitations

The APS was completed almost entirely by proxy for students in Grades 1 to 6 and for two-thirds of students in Grades 7 to 12. Proxy reports of student and familial characteristics and of school success indicators may be influenced by social desirability considerations (respondents answer questions in a way they expect to be more favourable) and the extent to which the proxy reporter is aware of the child's school experience.

Another limitation is that the APS is cross-sectional. Temporal relationships between school mobility and school outcomes cannot be determined. It is not possible to know if poor academic achievement precedes or follows school mobility.

As well, the present study examined the association between only one change of schools and academic outcomes. The cumulative effect of multiple school changes was not assessed because the reason (regular or non-regular progression) could be determined for only the last move. This is particularly important for the Aboriginal population, given that their rate of high school completion has been shown to decrease with the number of moves (Aman, 2008).

Additionally, it was not possible to look at school moves that occurred before Grade 7 for students in Grades 7 to 12. Therefore, associations between changing schools prior to Grade 7 and academic outcomes cannot be determined.

Future directions

The results of this analysis suggest a number of avenues for further study. For example, factors that might be protective against the negative associations between school mobility and academic outcomes among off-reserve First Nations students might be examined. The results of the multivariate analysis in this study show that in addition to school mobility, several other variables were significantly related to academic outcomes. Some of these associations were anticipated, and the factors (female sex, learning disability, household income and parental education) are not amenable to intervention. However, support of Aboriginal culture by the school, and for Grades 7 to 12 students, parental participation in school activities, were positively related to some measures of academic success and warrant further investigation.

Future studies of school mobility could examine associations with high school graduation, because data about Aboriginal people who completed high school and those who did not are available from the APS.

An examination of school mobility among off-reserve First Nations students by region could also be explored in light of curriculum differences in various jurisdictions (for example, provincial, on- or off-reserve schools, rural versus population centre residence).

As well, an analysis focusing only on multiple school moves could enhance understanding of the impact of school mobility. Future data collection might include questions about the reasons for each school move.

Conclusion

This study explored some of the reasons off-reserve First Nations students attending Grades 1 to 6 or Grades 7 to 12 last changed schools and compared the academic outcomes of movers and non-movers. The purpose was to determine if a non-regular progression school move was negatively related to academic success among off-reserve First Nations students.

Compared with students who did not change schools, those who did tended to have less favourable academic outcomes: movers in Grades 1 to 6 were more likely to have repeated a grade and to have received help from a tutor; movers in Grades 7 to 12 were less likely to get mostly As on their report card or to be happy at school and more likely to have repeated a grade. Even when the effects of variables such as age, sex, household income, living arrangements and rural/population centre residence were taken into account, off-reserve First Nations students who had a non-regular progression school move had significantly high odds of repeating a grade. Therefore, the rates of school mobility among First Nations students are important in understanding their academic outcomes.

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Appendices

Table A.1
Selected school outcomes for off-reserve First Nations students in Grades 1 to 6 or Grades 7 to 12 who never moved schools or had one regular progression school move, Canada, 2012

	Grades 1 to 6		Grades 7 to 12	
School outcomes	Never moved schools	One regular progression school move	Never moved schools	One regular progression school move
	percent			
Grade on last report card				
Mostly As	40.9	49.7	32.4	37.6
Mostly Bs, Cs, Ds, Es, Fs	59.1	50.3	67.6	62.4
Happy at school				
Strongly agree/agree	95.3	97.6	91.3	88.6
Disagree/Strongly disagree	4.7[t]	F	8.7	11.4
Ever repeated a grade				
Yes	5.5[t]	5.5[t]	13.7	12.5
No	94.5	94.5	86.3	87.5
Receiving help from a tutor				
Yes	20.6	25.1	22.6	19.3
No	79.4	74.9	77.4	80.7

[t] use with caution

F too unreliable to be published

Source: Statistics Canada, Aboriginal Peoples Survey, 2012.

Table A.2

Adjusted odds ratios relating school outcomes to school mobility and selected student, family and school support characteristics for off-reserve First Nations students in Grades 1 to 6, Canada, 2012

Selected student, family and school support characteristics	Reporting mostly As on last report card		Happy at school		Ever repeated a grade		Receiving help from a tutor	
	Adjusted odds ratios	95% confidence intervals	Adjusted odds ratios	95% confidence intervals	Adjusted odds ratios	95% confidence intervals	Adjusted odds ratios	95% confidence intervals
School mobility								
Non-movers†	1.00	...	1.00	...	1.00	...	1.00	...
Movers	0.69	(0.41-1.16)	0.70	(0.23-2.17)	2.11*	(1.12-3.97)	1.53	(0.95-2.46)
Sex								
Male†	1.00	...	1.00	...	1.00	...	1.00	...
Female	2.13*	(1.39-3.26)	0.80	(0.27-2.38)	0.46	(0.20-1.07)	1.01	(0.67-1.51)
Registered Indian Status								
Non-Status Indian†	1.00	...	1.00	...	1.00	...	1.00	...
Status Indian	1.28	(0.83-1.98)	1.67	(0.59-4.73)	1.63	(0.68-3.90)	1.27	(0.85-1.90)
Age‡	1.17*	(1.04-1.32)	0.87	(0.69-1.10)	1.27*	(1.08-1.49)	1.05	(0.93-1.18)
Diagnosed learning disability								
Yes	0.07*	(0.03-0.15)	0.36	(0.13-1.02)	2.30*	(1.09-4.88)	8.39*	(4.83-14.55)
No†	1.00	...	1.00	...	1.00	...	1.00	...
Household income quartile								
In lowest income quartile†	1.00	...	1.00	...	1.00	...	1.00	...
Not in lowest income quartile	1.25	(0.71-2.21)	0.86	(0.27-2.75)	0.65	(0.30-1.38)	0.73	(0.42-1.25)
Living arrangements of student								
With two parents†	1.00	...	1.00	...	1.00	...	1.00	...
With one parent	1.13	(0.61-2.11)	0.25*	(0.08-0.75)	0.61	(0.20-1.84)	1.09	(0.68-1.77)
With other relatives, non-relatives only or foster parent(s) only	0.90	(0.50-1.64)	0.61	(0.16-2.29)	0.92	(0.40-2.08)	1.28	(0.72-2.26)
Highest level of parental education								
Two parents/guardians have high school graduation or more†	1.00	...	1.00	...	1.00	...	1.00	...
One parent/guardian has high school graduation or more	0.62	(0.37-1.06)	0.78	(0.24-2.52)	2.55*	(1.08-6.04)	1.22	(0.79-1.88)
No parent/guardian has high school graduation or more	0.58	(0.24-1.43)	0.47	(0.10-2.25)	0.83	(0.32-2.13)	1.22	(0.59-2.54)
Residence								
Rural area†	1.00	...	1.00	...	1.00	...	1.00	...
Population centre	0.60*	(0.38-0.96)	0.87	(0.33-2.33)	0.55	(0.29-1.03)	1.29	(0.83-1.99)
School supports Aboriginal culture								
Strongly agree/Agree†	1.00	...	1.00	...	1.00	...	1.00	...
Disagree/Strongly disagree	1.18	(0.76-1.82)	0.56	(0.21-1.49)	2.11*	(1.13-3.96)	0.73	(0.45-1.18)

... not applicable

* significantly different from reference category ($p<0.05$)

† reference category

‡continuous variable in years

Source: Statistics Canada, Aboriginal Peoples Survey, 2012.

Table A.3

Adjusted odds ratios relating school outcomes to school mobility and selected student, family and school support characteristics for off-reserve First Nations students in Grades 7 to 12, Canada, 2012

	Reporting mostly As on last report card		Happy at school		Ever repeated a grade		Receiving help from a tutor	
Selected student, family and school support characteristics	Adjusted odds ratios	95% confidence intervals	Adjusted odds ratios	95% confidence intervals	Adjusted odds ratios	95% confidence intervals	Adjusted odds ratios	95% confidence intervals
School mobility								
Non-movers†	1.00	...	1.00	...	1.00	...	1.00	...
Movers	0.73	(0.42-1.25)	0.80	(0.40-1.58)	1.81*	(1.01-3.27)	1.04	(0.53-2.06)
Sex								
Male†	1.00	...	1.00	...	1.00	...	1.00	...
Female	2.61*	(1.86-3.66)	0.64	(0.38-1.06)	0.79	(0.51-1.22)	1.07	(0.71-1.61)
Registered Indian Status								
Non-Status Indian†	1.00	...	1.00	...	1.00	...	1.00	...
Status Indian	0.75	(0.52-1.09)	1.05	(0.61-1.81)	2.13*	(1.33-3.41)	1.11	(0.70-1.77)
Age‡	0.96	(0.86-1.07)	1.06	(0.93-1.21)	1.56*	(1.38-1.77)	0.84*	(0.75-0.94)
Diagnosed learning disability								
Yes	0.25	(0.14-0.46)	0.51	(0.21-1.19)	2.75*	(1.67-4.53)	11.91*	(7.22-19.64)
No†	1.00	...	1.00	...	1.00	...	1.00	...
Household income quartile								
In lowest income quartile†	1.00	...	1.00	...	1.00	...	1.00	...
Not in lowest income quartile	1.58	(0.97-2.57)	1.37	(0.62-3.01)	0.65	(0.39-1.11)	0.96	(0.54-1.71)
Living arrangements of student								
With two parents†	1.00	...	1.00	...	1.00	...	1.00	...
With one parent	0.79	(0.54-1.17)	0.64	(0.34-1.18)	0.85	(0.52-1.40)	0.77	(0.47-1.26)
With other relatives, non-relatives only or foster parent(s) only	0.77	(0.47-1.28)	0.76	(0.37-1.55)	1.13	(0.59-2.14)	0.75	(0.42-1.34)
Highest level of parental education								
Two parents/guardians have high school graduation or more†	1.00	...	1.00	...	1.00	...	1.00	...
One parent/guardian has high school graduation or more	0.72	(0.47-1.08)	0.54*	(0.31-0.94)	1.73*	(1.08-2.76)	0.69	(0.40-1.17)
No parent/guardian has high school graduation or more	0.94	(0.42-2.08)	0.98	(0.39-2.47)	1.99	(0.98-4.04)	1.04	(0.48-2.23)
Population centre								
Rural area†	1.00	...	1.00	...	1.00	...	1.00	...
Population centre	0.76	(0.53-1.11)	1.01	(0.62-1.64)	0.84	(0.54-1.30)	1.19	(0.77-1.85)
Parental involvement in education								
Yes†	1.00	...	1.00	...	1.00	...	1.00	...
No	0.52*	(0.37-0.75)	0.43*	(0.25-0.74)	1.29	(0.84-1.97)	1.81*	(1.14-2.87)
School supports Aboriginal culture								
Strongly agree/Agree†	1.00	...	1.00	...	1.00	...	1.00	...
Disagree/Strongly disagree	0.73	(0.51-1.04)	0.42*	(0.25-0.73)	0.97	(0.59-1.60)	1.08	(0.72-1.63)

... not applicable

* significantly different from reference category ($p<0.05$)

† reference category

‡ continuous variable in years

Source: Statistics Canada, Aboriginal Peoples Survey, 2012.

Table A.4

Item non-response rates[1], off-reserve First Nations students in Grades 1 to 6 or 7 to 12, Canada, 2012

		Grades 1 to 6	Grades 7 to 12
Variable	**Description**	percent	
DTUTBEH	Additional help/tutoring - Reasons required - Behavioural problem	7.3	4.6
DTUTEMOT	Additional help/tutoring - Reasons required - Emotional problem	7.8	4.8
DAVEGR	Academic performance - Percentage grade on last report card	5.8	4.6
DREPGR	Repeated a grade	0.3	0.3
DHAPPY	School climate - Happy at school	1.3	1.3
DRECTUT	Additional help/tutoring - Received	0.3	0.1
DHLOSMG	Highest level of education completed - Mother/female guardian-Grouped	2.4	5.6
DHLOSFG	Highest level of education completed - Father/male guardian - Grouped	11.6	12.6
DFAMINV	Parental/family involvement with school	1.1	0.9
DLRNDIS	Learning disability - Diagnosed	2.2	2.9
DSUPPCUL	School climate - Supports First Nations/Métis/Inuit culture	8.1	8.5

1. Item non-response includes responses of don't know, refusal, and not stated to survey questions. The item non-response rate is calculated by dividing the total item non-response by the study population, excluding valid skips. A 'valid skip' indicates that a question was skipped because it did not apply to the respondent's situation, as determined by valid answers to previous questions. Note that the above item non-response rates are restricted to respondents who gave a response other than don't know, refusal or not stated to the question "what grade or level are you currently in?" For additional information on item non-response and 'valid skips,' please refer to the Aboriginal Peoples Survey, 2012: Concepts and Methods Guide at www5.statcan.gc.ca/olc-cel/olc.action?lang=en&ObjId=89-653-X2013002&ObjType=46.

Source: Statistics Canada, Aboriginal Peoples Survey, 2012.